

GOLIK, A.Z. [Holyk, O.Z.]; SHIMANSKIY, Yu.I. [Shymans'kyi, Iu.I.]; KOBIYCHUK, N.M.  
[Kobiichuk, N.M.]

Compressibility of isoviscous substances [with summary in English].  
Ukr.fiz.zhur. 3 no.4:537-541 J1-Ag '58. (MIRA 11:12)

1. Kiyevskiy gosudarstvennyy universitet.  
(Compressibility)

GOLIK, A.Z.; MOCHARNYUK, R.F.

Physical properties and structure of normal alcohol solutions  
in acetone. Ukr. khim. zhur. 24 no.1:29-32 '58. (MIRA 11:4)

1.Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko,  
(Alcohols) (Acetone) (Solution (Chemistry))

KOTORLENKO, L.A.; GOLIK, A.Z.; KOVNERISTAYA, A.S.

Viscosity and electric conductivity of lithium chloride solutions in  
alcohols. Ukr.khim.zhur. 24 no.5:618-625 '58. (MIRA 12:1)

1. Kiyevskiy gosudarstvenny universitet imeni T.G. Shevchenko.  
(Lithium chloride) (Solution (Chemistry))

GOLIK, A.Z.; SOLOMKO, V.P.

Investigation of the physical properties of the water - acetone -  
alcohol system. Part 1: Water - acetone-ethanol system. Ukr.khim.zhur.  
24 no.6:734-740 '58. (MIRA 12:3)

1. Kiievskiy gosudarstvennyy universitet im. T.G. Shevchenko.  
(Acetone) (Ethyl alcohol) (Systems (Chemistry))

GOLIK, A.Z. [Holyk, O.Z.]

Viscosity and electrical conductivity of zinc and cadmium amalgams. Part 2. Ukr.fiz.zhur. 4 no.4:491-496 Jl-Ag '59.  
(MIRA 13:4)

1. Kiyevskiy gosudarstvennyy universitet im. P.G. Shevchenko.  
(Amalgams) (Zinc) (Cadmium)

GOLIK, A.Z. [Holyk, O.Z.]; SHIMAKSAYA, Ye.T. [Shymanska, O.T.]

Investigation of the critical state of substances by Ioseplis  
method. Part 2. Temperature dependence of the density of hexane  
near the critical point. Ukr.fiz.zhur. 4 no,6:769-788 N-D '59,

1. Kiyevskiy gosudarstvennyy universitet im. I.G.Shevchenko.  
(Hexane--Thermal properties)

GOLIK, A.Z.; SOLOMKO, V.P.

Investigation of the physical properties of the system water-acetone-alcohols. Part 2: System water-acetone-butanol. Ukr. khim. zhur. 25 no.1:40-44 '59.

(MIRA 12:4)

1. Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko.  
(Water) (Acetone) (Butyl alcohol)

NUCLEAR ENERGY INFORMATION SOV/5460

Severochar'niye po kriticheskim yavleniyam i fluktuatsiyam v  
rastvorakh. Moscow, 1960.

Kriticheskkiye yavleniya i fluktuatsii v rastvorakh; trudy  
II. sim'yi, yanvar' 1960 g. (Critical Phenomena and Fluc-  
tuations in Solution; Transactions of the Conference,  
January 1960) Moscow, Izd-vo Akad. Nauk, 1960. 190 p. 2,500  
kopii; printed.

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PURPOSE: This collection of articles is intended for scientific  
personnel concerned with chemistry, physics, and heat power  
engineering.

Card 1/9

Critical Phenomena and Fluctuations

SCV/B-63

COVERAGE. The book contains all the 20 reports given at the Conference on Critical Phenomena and Fluctuations in Substances organized by the Chemical Division of Soviet State Planning, January 26-28, 1980. The reports contain results of investigations carried out in research centers by Soviet physicists, chemists, and mathematicians. The Conference; the dates of the Conference will be given by Professor Kh. I. Amirkhanev, A. A. Felik, I. R. Krichevskiy (Chairman), V. K. Sverdlenko, A. V. Storontsev, I. A. Fischer, and M. I. Shalsharenov (Deputy Chairman). References accompany individual articles.

TABLE OF CONTENTS:

Foreword	3
Amirkhanev, Kh. I., A. M. Kerimov, and B. G. Alibekov [Institut po materialy molekulyarnoy fiziki, Dagestanskij filial AS SSSR -- Laboratory of Molecular Physics, Dagestan Branch, AS USSR]. Thermophysical Properties of Matter at Critical Temperature	5

Card 2/9

50

Diffusion in Liquids and Fluctuations 36V/5463

Zemlyanik, L. P., and Yu. V. Tsekhanskaya [Laboratory of the Dielectric Chemistry of Solutions, Oil Industry Division, Moscow State University under I. V. L'vovskiy]. Naphthalene Liquid State Spins in Nitrobenzene -- Cyclohexene and Ethyl Alcohol -- Dimethylamine Solutions

32

Khokhlov, R. M., and M. I. Shchukin [Laboratory of the Dielectric Chemistry of Solutions, Oil Industry Division, Moscow State University under I. V. L'vovskiy]. Dielectric Properties of Solutions in Electric and Magnetic Fields of the Millimeter Region and Concentration Fluctuations

37

Krichevskiy, I. R., and N. Ye. Kuz'manova [Laboratory of Vysokikh davlenii, GIAP -- Laboratory of High-Pressure [Studies], Moscow State Design and Planning Scientific Research Institute of the Nitrogen Industry]. Diffusion of Liquid and Gaseous Solutions in the Critical Region

45

Krichevskiy, I. R., and Yu. V. Tsekhanskaya [Laboratory of

Card 4/9

critical fluctuations  
Sov/5469

1. Critical [Turbulence]. Dynamics of Macroporous  
Structure in the Critical Region 54

2. Golovly, I. R., N. N. Klykov, and L. B. Litvinov [Institu-  
te of High Pressure [Institute of High Pressure]. Liquid-Vapor  
Equilibrium in the Critical Region of Liquid-Suspir Strati-  
fication 61

3. Klykov, N. N., and M. I. Slobodchikov [Institute of the  
Physical Chemistry of Solutions, Chemistry Division, Moscow  
State University imeni M. V. Lomonosov]. Permittivity and  
Molecular Structure of Solutions 73

4. Panashina, L. V., and M. I. Slobodchikov [Institute of the  
Physical Chemistry of Solutions, Chemistry Division, Moscow  
State University imeni M. V. Lomonosov]. Thin Structure of  
the Line of Rayleigh Light Clustering in Solutions 77

5. Reikov, N. V., and Ya. N. Khovskiy [Kafedra experimental'noy  
fiziki, Dnepropetrovskiy gosudarstvennyy universitet -- Depart-  
Card 5/9

307/5309

Critical Phenomena and Fluctuations	
Institute of Experimental Physics, B. V. Gribkov State University.	
Investigation of Small-Scale Fluctuations in the Density and Structure	
Region of X-ray Scattering; Critical Opalescence	81
McGraw, M. V., and I. V. Kirch [Institute of Experimental Physics, B. V. Gribkov State University] Variation in the Size of Ionic Aggregation Fluctuations in a Relationship to Concentration. 1. Concentration in Strong Liquid Systems Having an Upper Critical Dissolving Concentration	89
Medvedev, V. P., B. I. Mal'yshchev, and N. G. Svirskovich [Voronezhskiy oblastnoy pedagogicheskii in-tiit -- Pedagogical Institute of the Voronezh Oblast]. Mykhalevskiy Investigation in Organic Liquids at Constant Density in the Vicinity of the Critical State	93
Rost, L. A. [Minskii lesotekhnicheskiy institut -- Minsk Forestry Engineering Institute]. Concerning the Diffusion in the Critical Stratification Region	102

Card 6/9

35

SOV/Subject

Roshchinskaya, G. P. [Laboratoriya molekulyarnoy fiziki, Nizhniy Novgorod, Kirovskiy gosudarstvennyy universitet im. T. G. Shevchenko -- Laboratory of Molecular Physics, Division of Physics, Kiev State University Imeni T. G. Shevchenko] Investigation of Fluctuations in Solutions by the Method of Raman Scattering

100

Shmelev, V. P. [Laboratoriya molekulyarnoy fiziki]. Ural'skiy gosudarstvennyi khimicheskiy institut im. S. M. Kirova -- Laboratory of Molecular Physics, Ural Polytechnical Institute imeni S. M. Kirova. Special Structural Features of Matter in the Vicinity of the Critical Point and Transfer Phenomena

117

Surzhev, V. P., and Yu. D. Kolpakov [Laboratory of Molecular Physics, Ural Polytechnic Institute imeni S. M. Kirov, and the Laboratoriya teplotofiziki, Ural'skiy filial AN SSSR -- Thermophysics Laboratory, Ural Branch, AS USSR]. Light Scattering in Carbon Dioxide along Pre- and Post-Critical Isotherms 125

Smirnov, B. A. [Institut neftekhimicheskogo sinteza AN SSSR --  
Card 7/9

Critical Phenomena and Fluctuations	SCW/5469
Institute of Petrochemical Synthesis, AS USSR (Moscow)] Visual Observations in the Critical Region	137
Fischer, I. Z., and V. K. Prokhorenko. Concerning the Fluctuations of Coordination Numbers in Liquids	142
Fischer, I. Z. [Belorussky Gosudarstvennyy Universitet -- Belorussian State University (Minsk)] Correlation Analysis of the Critical Point	148
Shchukin, N. I. [Institute of the Physical Chemistry of Solutions, Chemistry Division, Moscow State University imeni M. V. Lomonosov]. Fluctuations in Solutions	151
Shimanskaya, Ye. T., and A. Z. Gelik [Laboratory of Molecular Physics, Physics Division, Kiev State University imeni T. G. Shevchenko]. Investigation of the Critical State, Liquid-Vapor, of Solutions by Teppler's Method	161

Card 8/9

30

Critical Phenomena and Fluctuations

10/3/69

Shcheglova, Ye. T., Yu. I. Suttor, V. V., and A. Z. Galik (Institute of Molecular Physics, Lviv State University, Ukraine). Investigations of the Critical State of Pure Substances by Computer Method

172

Conclusion of the Conference on Critical Phenomena and Fluctuations in Solutions

139

AVAILABLE: Library of Congress (QD545.S73)

JP/RLW/10  
10-10-01

Card 9/9

25571  
S/185/60/005/002/012/022  
D274/D304

15.8500

AUTHORS: Golyk, O.Z. and Cholpan, P.P.

TITLE: Molecular structure, compressibility, surface tension and viscosity of certain polysiloxanes

PERIODICAL: Ukrayins'kyy fizichnyy zhurnal, v. 5, no. 2, 1960,  
242-250

TEXT: Polymethyl- and polyethylsiloxanes with linear molecules are experimentally studied, this article being a continuation of one of the authors previous works: O.Z. Golyk (Ref. 2: UkrZh, 23, no. 2, 139, 1957, and 2 articles in collaboration with others). From intensity curves of X-ray scattering, electron-density curves were constructed; these were used for determining the valence angles, the length of the chemical bond, and the packing of the molecules in the liquid state. The intensity curves, plotted on figures, show that polymethyl- and polyethylsiloxanes with linear molecules have a similar structure in the liquid state. The density, surface tension, compressibility and viscosity of these substances were

Card 1/3

Molecular structure...

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D274/D304

investigated for a wide temperature range; figures and tables are given with the results of these investigations. For polymethylsiloxanes, the polytherms of surface tension and of viscosity are the higher, and those of compressibility - the lower, the higher the potential of intermolecular forces, and the higher the critical temperature of the substance. The surface tension is also in direct proportion with the size of the molecules. Adiabatic compressibility of polymethylsiloxanes was studied by means of an ultrasonic interferometer. The temperature dependence of viscosity follows an exponential law. The polytherms of surface tension and of viscosity in the case of polyethylsiloxanes, are also the higher, the higher the potential of intermolecular forces and the higher the critical temperature. The activation energy too, is in direct proportion with intermolecular potential and critical temperature. The viscosity of binary solutions of polymethylsiloxanes was also studied, and isoviscous substances were obtained; both the activation energy and also compressibility of the isoviscous substances is practically the same. This study gives additional proof of the correspondence between structure and intermolecular forces on the

Card 2/3

Molecular structure...

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D274/D304

one hand, and surface tension, compressibility, and viscosity on the other. There are 9 figures, 4 tables and 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: H.S. Green, The molecular theory of fluids, Amsterdam, 1952; I.J. Kirkwood a. F.P. Buff, J. Chem. Phys., 17, 338, 1949; I.J. Kirkwood, F. P. Buff, H.S. Green, J. Chem. Phys., 17, 998, 1949.

ASSOCIATION: Kyyvs'kogo ordena Lenina universytetu im. T.G. Shevchenka (Kiyev Order of Lenin University im. T.G. Shevchenko), Department of Molecular Physics

SUBMITTED: October 1, 1959

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Card 3/3

GOLIK, A.Z. [Holyk, O.Z.]; CHOLPAN, P.F. [Cholpan, P.P.]

Molecular structure and physical properties of some poly-siloxanes. Part 2: Structure and physical properties of isoviscous polysiloxanes. Ukr. fiz. zhur. 5 no.6:843-849 N-D '60.  
(MIRA 14:3)

1. Kiyevskiy ordena Lenina gosudarstvennyy universitet im. T.S. Shevchenko.

(Siloxanes)

GOLIK, A.Z. [Holyk, O.Z.]; CHOLPAH, P.F. [Cholpan, P.P.]

Molecular structure and physical properties of some polysiloxanes.  
Part 3: Viscosity, compressibility, and structure of liquid cyclic  
polysiloxanes. Ukr. fiz. zhur. 5 no.6:850-856 N-D '60.  
(MIRA 14:3)

1. Kiyevskiy ordena Lenina gosudarstvennyy universitet im. T. G.  
Shevchenko.

(Siloxanes)

SKRYSHEVSKIY, Anton Frantsovich; GOLIK, A.Z., prof., ctv. red.;  
DROZHIN, E.V., red.; OKOITAYA, Ye.D., tekhn. red.

[Diffraction of X rays, electrons, and neutrons in gases and  
the molecular structure] Difraktsiya rentgenovskikh luchei,  
elektronov i neitronov v gazakh i stroyenie : molekul. Kiev, Izd-  
vo Kievskogo univ., 1961. 84 p. (MFA 15:9)  
(X rays--Diffraction) (Electron diffraction examination)  
(Neutrons--Diffraction)

GOLIK, A.Z.; CHOLPAN, P.F.

Speed of ultrasound in some polysiloxanes. Akust.zhur. 7 no.1:33-39  
'61. (MIR 14:4)

1. Kiyevskiy gosudarstvennyy universitet.  
(Siloxanes)  
(Ultrasonic waves)

5/08/67 000/021/010/094  
E-02/5158

AUTHORS: Shimanskaya, Ye. T., Shimanskaya, I. I., Golik, A. S.

TITLE: Investigation of the critical state of pure substances by  
Tepier's method

PERIODICAL: Referativnyy zhurnal. Khimika, no. 01, 1961, 43, abstract  
21B347 (Sb. "Kritich. yavleniya i flyuktuatsii v rastvorakh";  
M., AN SSSR, 1960, 17, p. 188)

TEXT: A method has been developed for the investigation of critical  
states, by means of which the density  $\rho$  of a substance can be measured  
in any point in a chamber (by the optical Kepler method) with long-time  
thermostating. The apparatus is described in detail. Heptane and hexane  
were examined. Density has a non-monotonic gradient with respect to the  
chamber height  $Z$  and has a maximum at the meniscus. This maximum  
increases as the temperature approaches the point  $T_m$  at which the meniscus  
vanishes. With a steady temperature change rate,  $\sim 1^{\circ}\text{C}/\text{hr}$ , the  $d\rho/dZ$   
maximum is present on heating and absent on cooling (i.e., a hysteresis  
is observed). With irregular changes in temperature and long-time  
Card 1/2

S/03161000/C2 /010/094

8/02/81/8

Investigation of the critical

(15-20 hr) thermostating, the  $\alpha(d)$  maximum is however present on heating as well as cooling; the maxima are then lower than in the case of steady heating. The  $\alpha(Z)$  curves are found by integrating  $d\alpha/dZ = f(Z)$ . For  $T \approx T_m$  they are S-shaped. In the lower part of the chamber density is higher, and in the upper part lower than critical. This is in full agreement with classical representations regarding the existence of a critical point and not a region when allowing for the effect of gravitational field. The critical state is realized only in a narrow layer at the point where the modulus vanishes. Above and below this layer the substance is not in a critical state although its temperature is critical. As the density difference throughout the chamber corresponds at the critical temperature to the equilibrium state, then it must be assumed that displacement sometimes occurs. Levelling the density and removing the system from the state of equilibrium. [Abstracter's note: Complete transition.]

Card 2/2

GOLIK, A.S.; BAKHNOVSKIY, V.Ye.

Heat of vaporization, composition of vapors, and surface tension  
of solutions of paraffins and alcohols. Ukr.khim.zhur. 27 no.5:  
574-577 '61. (MIFI 14:9)

U. Kiyovskiy pedagogicheskiy universitet im. T.G. Shevchenko.  
(Paraffins) (Alcohols)

GOLIK, A.Z.; BAIKOVSKIY, V.Ye.

Latent heat of vaporization of alcohols in acetone solutions.  
Ukr.RKhN.znam. 27 no.5:577-580 '61. (MIRA 14:9)

1. Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko.  
(Alcohols) (Heat of vaporization)

15 8:70

8110/8117

AUTHORS. Golik, A. Z., Cholpan, P. F., Ivanova, I. I.

**TITLE:** Investigation of some physical properties of poly-  
phenyl siloxanes

PERIODICALS: Ukrainskiy khimicheskiy zhurnal, v. 57, no. 6, p. 1017  
754 - 762

Card 1/6

8

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8.1/8.17

Investigation of some physical...

-OSi(CH<sub>3</sub>)<sub>3</sub>; polymer 1 (P1) (CH<sub>3</sub>)<sub>2</sub>Si[OSi(CH<sub>3</sub>)<sub>3</sub>]<sub>n</sub>OSi(CH<sub>3</sub>)<sub>3</sub> (P2)

structure of the polymethyl phenyl siloxane was investigated, and their molecular weight was determined. The viscosities of P1 and P2 increased linearly with temperature according to the experimental data. The polytherms of the viscosities of P1 and P2 correspond to the following formulas:

Only the first three substances correspond to the formulas of the polymers.

$\eta \cdot C/(V \cdot d)$  (Table 1) Between 0 and 200°C, the viscosity increased with increasing temperature. Ultrasonic speed was measured with an ultrasonic interferometer by I. G. Mikulincer (given in Table 1). The speed was calculated according to the formula  $\lambda = c / f$ , where  $c$  is the speed of the length of ultrasonic wave,  $f$  is a generator frequency. The speed of the trimers with  $\text{C}_6\text{H}_5$  groups (#), of the trimers with  $\text{C}_6\text{H}_5$  groups and of the methyl trimers (#) and of the tetramers (#) and of the tetramer with two  $\text{C}_6\text{H}_5$  groups decreased linearly with increasing temperature, with the polytherm of  $\lambda$  (mm) of the trimers with  $\text{C}_6\text{H}_5$  groups.

Card 2/3

Investigation of some physical...

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S/073/61/027/006/002/005  
B110/B147

polytherm of D lies above that of E. In P1, P2, and P3, a slight deviation from linearity was found at 40°C (near their solidification point). Adiabatic compressibility was calculated by;  $\beta = 1/a^2 \rho$  ( $a$  = ultrasonic speed,  $\rho$  = density,  $\beta$  = adiabatic compressibility. It is inversely proportional to the number of phenyl radicals. From the linear dependence;  $\ln \beta = f(t)$ ,  $\beta = \beta_0 \exp(T/C)$  is derived;  $T$  = experimental temperature,  $\beta_0$  = adiabatic compressibility at  $T = 0$ ,  $C$  = constant (Table 2). There are 10 figures, 2 tables, and 3 Soviet references.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko  
(Kiyev State University imeni T. G. Shevchenko)

SUBMITTED: September 29, 1960

Card 3/5

GOLIK, A.Z.; KLASSEN, I.F.; KUCHAK, G.M.

Speed of propagation of ultrasonic waves in certain zinc and cadmium amalgams. Akust. zhur. 7 no.2:258-260 '61. (MIRA 14:7)

1. Kiyevskiy gosudarstvennyy universitet.  
(Ultrasonic waves--Speed) (Zinc amalgam)  
(Cadmium amalgam)

GOLIK, A.Z., prof., ctv. red.; ROSHCHINA, G.P., dots., ctv. red.;  
MIRONETS, Ye.M., red.; KHOKHANOVSKAYA, T.I., tekhn. red.

[Structure and physical properties of matter in the liquid state; materials] Stroenie i fizicheskie svoistva veshchestva v zhidkoy sostoyaniye; materialy. Kiev, Izd-vo Kievskogo univ., 1962. 146 p. (MIRA 15:9)

1. Sovershchennye posvyashchennye problemy zhidkogo sostoyaniya veshchestva. 4th, Kiev, 1959.  
(Liquid)

GOLIK A.Z.

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STRUCTURE AND PHYSICAL PROPERTIES OF MATTER IN A LIQUID STATE  
Reports read at the 4th Conference convened in KIEV from 1 to 5 June  
1959, published by the Publishing House of KIEV University, KIEV,  
USSR, 1962

A.S. VOL'KA and I.P. AL'ISEN, Connection between Viscosity and Electrical Conductivity and the Structure of Zinc and Calcium Alloys	96
A.S. LASHKO, Roentgenographic Investigation of the Liquid Au-In Alloy	161
A.V. ROMANOV and A.S. LASHKO, Roentgenographic Investigation of the Structure of Tin-Lead Liquid Alloys	167
V.I. GERASIMOV, A.V. VIKHROLEVSKAYA and A.V. YEVSEYEV, Thermoelectric Properties of Liquid Metallic Alloys	115
V.I. GERSHUVSKII and B. V. SOKOLOV, Investigation into the Transition Layer of a Liquid Metallic Surface	113
V.V. S. LUK'YANOV, on the Main Types of Phase Transitions	114
V.V. LUK'YANOV and V. V. KARAS'KOV, Dielectric Properties of the Binary Alloys Systems within the Critical Region in the Frequency Range	122

*GOLIK, A.Z.*

STRUCTURE AND PHYSICAL PROPERTIES OF MATTER IN A LIQUID STATE  
 reports read at the 4th Conference convened in KIEV from 1 to 5 June  
 1969, published by the Institute of Chemistry of KIEV University, Kiev,  
 USSR, 1969.

A.Z. GOLIK and I.P. BOKLAN, Molecular Structure, Solubility, Surface Tension and Viscosity of some Polythioethers	57
N.N. GORELIKOV, Problem of Viscosity of Concentrated Solutions of Liquids	65
O.YA. S. BOYKOV, Connection Between the Composition Number and the Thermal Lattice of Aqueous Solution Particles of Elec- trolytes	71
I.G. VISH YI-YI and YU.YA. SYKAI-OV, Thermal Dependency of the Ionistic Impermeability of the Aqueous Solutions of Ions at Low Concentrations	74
N.I. BELYI and S.I. KUZ'GO, The Effect of Solvents and Temperature on the Ionization Capacity of Tin Salt Solutions	79
YU.YA. GOLIKOV, K.I. SOKOLOV and V.A. KHIVYEV, Theory of Ultrasonic Absorption in Polymer Solutions	81
G.A. PARTYSHEVICH, Connection Between the Structural Units of Gases and Structural Units of Liquids	97

ROSHCHINA, Galina Petrovna; GOLIK, A.Z., prof., otd. red.; VENKO,  
V.I., red.; V. V. ANTONOV, T.T., telkin red.

[Molecular scattering of light in gases] Molekulyarnoe ras-  
sei ni sveta v zashch. Kiev, Izd-vo Kiev. gos. univ., 1972,  
37 s.  
(MIRA 16:11)  
(Duran effect) (Scattering (Physics)) (Light--Scattering)

GOLIK, A.Z., prof., otv. red.; MOSCHINA, G.P., dots., otv. red.;  
- MIHONETS, Ye.M., red.; KHOKHANOVSKAYA, T.I., tekhn.red.

[Structure and physical properties of matter in the liquid state; materials] Stroenie i fizicheskie svoistva veshchestva v zhidkem sostoianii; materialy. Kiev, Izd-vo Kievskogo univ., 1962. 146 p. (MIRA 15:9)

1. Soveshchaniye posvyashchennoye probleme zhidkogo sostoyaniya veshchestva. 4th, Kiev, 1959.

(Liquids)



1970-1971. The first year of the  
new century.

APPROVED FOR RELEASE: 09/24/2001

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5/843/62/000/000/006/010  
5207/5308

AUTHOR: Golik, A.I. and Klassen, I.F.

TITLE: Relationship of the viscosity and electrical conductivity with the structure of zinc and cadmium amalgams

PUBLISHER: Otdroyenije i fizicheskiye svoystva veshchestva v zhidkem sostoyanii; materialy IV soveshch. po probl. zhidkogo sost. veshchestva, v Kiyev'e 1959 g. Kiev, Izd-vo Kiev. univ., 1962, 96-100

TEXT: The purpose of this work was to check the hypothesis that both the first (shear) viscosity and the electrical conductivity of liquid metals and their solutions are related to the short-range order. The viscosity, density and electrical conductivity of zinc and cadmium amalgams were measured at temperatures up to 350°C in a wide range of compositions. Amalgams with the same viscosity had the same short-range order but different electrical conductivities. Amalgams with the same electrical conductivity had practically the

Card 1/2

Relationship of the viscosity ...

3/343/62/000/000/006/010  
D207/J308

same density but different viscosities. The results confirm the hypothesis cited above. There are 4 figures and 1 table.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet (Kiev State University)

Card 2/2

GOLIK, A.Z.; RYNDICH, N.A.; KUCHINKA, M.Yu.; ANDRIYENKO, S.S.

Thermomechanical properties of cord made from polycaprolactam.  
Khim.volok. no.2:23-25 '62. (MIRA 15:4)

1. Kiyevskiy gosudarstvenny universitet im. Shevchenko.  
(Textile fibers, Synthetic) (Azepinone)

GOLIK, A.Z., [Holyk, O.Z.]; CHOLPAN, P.F. [Cholpan, P.P.]

Molecular structure and physical properties of certain siloxanes.  
Part 4. Density of two-component solutions of liquid siloxanes.  
Ukr.fiz.zhur. 7 no.5:549-553 My '62. (MIRA 16:1)

1. Kiyevskiy gosudarstvennyy universitet im. Shevchenko.  
(Siloxanes)

GOLIK, A.Z. [Holyk, O.Z.]; CHOLPAN, P.F. [Cholpan, P.P.]

Molecular structure and physical properties of certain siloxanes.  
Part 5. Surface tension and molecular interaction of liquid  
siloxanes. Ukr.fiz.zhur. 7 no.5:554-558 My '62. (MIRA 16:1)

1. Kiyevskiy gosudarstvennyy universitet im. Shevchenko.  
(Siloxanes)

GOLIK, A.Z. [Holyk, O.Z.]; CHOLPAN, P.F. [Cholpan, P.P.]

Density and short-range coordination of certain liquids. Ukr.  
fiz. zhur. 7 no. 5:559-562 My '62. (MIRA 16:1)

1. Kiyevskiy gosudarstvennyy universitet im. Shevchenko.  
(Liquids)

GOLIK, A.Z.

Present stage and problems of the physics of liquids. Upr.fiz.  
zhur. 7 no.7:685-686 Jl '62. (MIRA 15:12)  
(Liquids)

8/185/62/007/008/001/008  
D234/D303

3. 7  
AUTHOR: Golik, A.Z.

TITLE: Connection of compressibility and sheer viscosity  
with the structure of liquid state of matter

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 8, 1963,  
806 - 811

TEXT: The author gives the experimental values of compressibilities and shear viscosities of several paraffins, methylsiloxanes and alcohols, obtained by him in collaboration with P. F. Cholpan and I. I. Ivanova. Graphs of temperature dependence of these quantities are given for all substances mentioned. The compressibility was determined from data on density and ultrasound velocity, the latter being measured by I. T. Mikhaylov's interferometer. The empirical formula for the temperature dependence of the compressibility  $\beta = \beta_0 \exp [\alpha T]$  is found to agree with experiment better than the expression given by the cell theory. The temperature dependence of viscosity is described by Ya. I. Frenkel's formula  $\eta = A \exp$   
Card 1/2

Connection of compressibility and ... S/135/62/007/008/001/008  
D254/D508

[B/RT]. A table of critical temperatures and the values of  $\rho_0$ ,  $\alpha$ ,  $B$  and  $A$  is included. It is found that there is a correlation between  $B$  and  $\alpha$ . Properties of isoviscous substances for each group were studied. The author gives as an example the graph of intensity of scattered X-rays, plotted against the scattering angle, for  $(\text{CH}_3)_{10}\text{Si}_4\text{O}_3$  and the solution consisting of 48.73% of  $(\text{CH}_3)_8\text{Si}_3\text{O}_2$  and 51.27% of  $(\text{CH}_3)_{12}\text{Si}_3\text{O}_4$ , isoviscous with the former. All experimental points are situated on the same curve, which indicates that the isoviscous substances have the same structure. There is 1 table and 8 figures.

ASSOCIATION: Kiyevskiy universitet (Kiev University)

Card 2/2

APPROVED FOR RELEASE: 09/24/2001  
CIA-RDP86-00513R000515720010-0

ANALYST: [REDACTED] BY [REDACTED] 10/20/01

CLASS: CONFIDENTIAL BY [REDACTED] 10/20/01

PERIODIC: [REDACTED] BY [REDACTED] 10/20/01

TABLE 7 presents surface tension data for pure  $\text{C}_2\text{H}_5\text{Cl}$  and for the temperature dependence of surface tension for the tension of individual molecules and mixed systems. Surface tension was determined from the weight of the solution taken at 1 atm,  $P$ , the maximum pressure (constant for formation), and  $\gamma$  is the capillary constant. A suitable form is  $\gamma = 10 + 10 \cdot \text{exp}(-\text{ATC} \cdot \text{temp})$ . Extrapolation was used. The surface tension is plotted against absolute temperature. For linear methanol and ethyl chloride, the temperature coefficients were almost equal, those of the individual molecules varied. A linear dependence of  $\gamma$  on  $\text{P}$  is valid, with a constant property of the liquid,  $\gamma$ , that of the vapor, and  $\text{P}$  the Bernoulli's constant. It is indicated in the calculation of the surface of  $\text{P}$  from  $\gamma$ .  $\sqrt{\gamma}$  and  $\gamma$  is the molecular weight which were in conflict with the other method. The value of surface tension  $\gamma$

### Surface tension of empty glass

# THE HISTORY OF THE AMERICAN PEOPLE

APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515720010-0"

## 4.2.2. *Antennae* and *Antennal Lobe*

• 1 •

July 1977: players by position, number won and lost, and average winning percentage.

19. *Leucosia* (Leucosia) *leucostoma* (Fabricius) (Fig. 10)

Carroll

BARANOVSKIY, V.Ye.; SHIMANSKIY, Yu.I.; GOLIK, A.Z.

Heat of evaporation of the ternary system ethyl alcohol-butyl  
alcohol - acetone. Ukr.khim.zhur. 28 no.4:484-486 '62.

1. Kiyevskiy gosudarstvennyy universitet imeni T.G.Shevchenko.  
(Ethyl alcohol) (Butyl alcohol) (Acetone)  
(Heat of evaporation)

GOLIK, A.Z.; RYNDICH, N.A.; NUZHNYY, V.M.; CALAGAN, Yu.

Velocity of ultrasound and the compressibility of alcohol -  
acetone - water solutions. Ukr.khim.zhur. 28 no.4:506-510 '62.

(MIRA 15:8)

1. Kiyevskiy gosudarstvennyy universitet imeni T.G.Shevchenko.  
(Alcohols) (Acetone) (Ultrasonic waves—Speed)

GOLIK, A.Z.; IVANOVA, I.I.

Molecular structure, density, compressibility, and shearing viscosity of n.paraffins in the liquid state. Zhur.fin.khim. 35 no.8:1768-1770 Ag '62. (MIRA 15:8)

1. Kiyevskiy gosudarstvennyy universitet.  
(Liquids) (Paraffins)

GOLIK, A.Z. [Holyk, O.Z.]; KUCHINKA, M.Yu. [Kuchynka, M.IU]

Temperature-time dependence of the strength of polymers at a  
constant tension rate. Ukr. fiz. zhur. 8 no.4:479-486 Ap '63.

(MIRA 16:8)

1. Kiyevskiy Gosudarstvennyy universitet im. Shevchenko,  
(Polymers--Testing)

BARANOVSKIY, V. Ye., COLIK, A. Z.

Latent heat of vaporization of water-alcohol solutions, Ukr.,  
Khim. zhur. 29 no. 2 (1955) 14. (MIRA 16:5)

1. Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko.  
(Heat of evaporation) (Alcohols)

GOLIK, A.Z.; ADAMENKO, I.I.; CHOLPAU, P.F.

Effect of molecular interaction on the compressibility and  
viscosity of liquids. Ukr. fiz. zhur. 9 no.4:412-416 Ap '64.  
(MIRA 17:8)  
l. Kiyevskiy gosudarstvennyy universitet.

**"APPROVED FOR RELEASE: 09/24/2001**

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APPROVED FOR RELEASE: 09/24/2001

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APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515720010-0"

L 51442-65 EWT(m)/EPF(c) Pr-L RM  
ACCESSION NR: AP5011070

UR/0105/65/010/004/043/0449

AUTHOR: Holyk, O. Z. (Golik, A. Z.); Adamenko, I. I.

TITLE: Compressibility and molecular structure of liquids. I. Compressibility of n-paraffins and of their mutual solutions

SOURCE: Ukrajins'kyj fizichnyj zhurnal, v. 10, no. 4, 1965, 143-149

TOPIC TAGS: n-paraffin, molecular structure, compressibility, liquid state, activation energy, viscous flow, intermolecular force

ABSTRACT: The authors investigate the compressibility of liquids having an identical molecular structure and the same type of intermolecular forces (the n-paraffins: n-heptane, n-octane, n-nonane, n-undecane, and n-hedecane). It is shown that the compressibility polytherms of these liquids lie the lower the deeper the potential well on the molecular interaction curve and the larger the activation energy of viscous flow. It is also shown that under certain conditions it is possible to attain coincidence of the polytherms of compressibility of solutions of paraffins and pure substances or other solutions of paraffins of different composi-

Card 1/2

L 51442-65

ACCESSION NR: AP5C11070

tions (these substances are called iso-compressible). Iso-compressible substances have identical activation energy of viscous flow and identical energy of intermolecular interaction. The adiabatic compressibility polytherms of the investigated normal paraffins are well described by the empirical formula  $\beta_{ad} = \beta_0 \exp \alpha T$  in which the constant  $\alpha$  is inversely proportional to the viscous-flow activation energy. The dependence of the adiabatic compressibility on the potential of the intermolecular interaction is in good agreement with modern statistical and model theories of liquids. Orig. art. has: 5 figures, 6 formulas, and 4 tables.

ASSOCIATION: Kyyiv's'kyy dershuniversytet im. T. G. Shevchenka [Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko] (Kiev State University)

SUBMITTED: 21Nov64

ENCL: 00

SUB COMB: 00, ME

MR REF SGV: 003

OTHER: 003

me  
Card 2/2

"APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515720010-0

1. (b) (1) and (b) (7) (D) and (E) (b) (7) (D)

2. (b) (1) and (b) (7) (D) and (E) (b) (7) (D)

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000515720010-0"

ACC NR: AP7004553

SOURCE CODE: UR/0185/66/011/007/0797/0801

AUTHOR: Golik, A. Z.; Cholpan, P. P.; Tarasenko, O. V.

ORG: Kiev State University im. T.H. Shevchenko (Ukrayins'kyj derzhuniversitet)

TITLE: Velocity of ultrasonic vibrations and compressibility of liquid siloxanes

SOURCE: Ukrayins'kyj fizichnyj zhurnal, v. 11, no. 7, 1966, 797-801

TOPIC TAGS: siloxane, temperature dependence, ultrasonic vibration

ABSTRACT: The authors investigated the temperature dependence (within the range of 0 - 200°C) between the velocity of ultrasonic vibrations and the adiabatic compressibility of linear methylsiloxanes - octamethyltrisiloxane, deca-methyltetrasiloxane, dodecamethylpentasiloxane, cyclic methylsiloxanes - octamethylcyclotetrasiloxane, decamethylcyclopentasiloxane, and methylphenyl-siloxanes - heptamethylphenyltrisiloxane, pentadethyltrisiloxane, octa-methyldiphenyltetrasiloxane.

It is determined that the temperature dependence of ultrasonic velocity at high temperatures deviates from the linear dependence. The adiabatic compressibility obeys an exponential law over a small range of temperatures only. It is shown that the compressibility of siloxanes decreases with the increase of the intermolecular force potential and the co-ordination number.

Orig. art. has: 4 figures, 3 formulas and 2 tables. [JPRS: 37.332]

SUB CODE: 20,07 / SUBM DATE: 11Dec65 / ORIG REF: 009

Card 1/1

GOLIK, F.K., vrach

Simplified apparatus for the subcutaneous injection of oxygen and solutions. Zdrav. Kazakh. 17' no.9:48-50 '57.

(MIRA 12:6)

1. Iz oblastnogo kozhno-venerologicheskogo dispensera Severo-Kazakhstanской области Казахской ССР.

(MEDICAL INSTRUMENTS AND APPARATUS) (INJECTIONS, HYPODERMIC)

65-38-6-4/43

AUTHOR: Golik, G., Senior Inspector-Pilot, DOSAAF Republic Committee of the Ukraine (Kiev) (Respublikanskiy komitet DOSAAF (Kiev))

TITLE: Model-airplane Builders Prepared for Sports Combat (Aviamodelistsy gotovy k sportivnoy bor'be)

PERIODICAL: Vremya modeli, 1958, No. 6, p. 2 (USSR)

ABSTRACT: The author states that teams of some 270,000 model airplane builders are now being trained by 4,000 public instructors in DOSAAF primary organizations in the Ukraine. Personalities mentioned include: USSR champion Ye. Kondratenko, N. Den'yavchenko, Ye. Kucherov, Yu. Salk, M. Cherkasskiy, V. Sheremet. In June and July [1958], 22,000 model airplane builders will compete at the Spartacus Games.

ASSOCIATION: DOSAAF Republic Committee of the Ukraine

1. Airplane-model building

Card 1/1

GOLIK, G.

At gatherings. Kryl. rod. 14 no. 2:18 F 16:2.

(MIRA 16:4)

1. Nachal'nik otdela aviationsionnoy podgotovki respublikanskogo  
komiteta Dobrovol'nogo obshchestva sodeystviya armii,  
aviatsii i flotu.

(Ukraine—Parachuting)

ACC NR: A0651151

SOURCE CODE: US/0079/66/036/009/1634/1639

AUTHOR: Shekai, V. A.; Golik, G. A.; Libman, B. Ya.; Derkach, G. I.

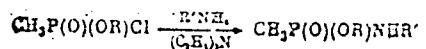
ORG: Institute of Organic Chemistry, Academy of Sciences, UkrSSR (Institut organicheskoy khimii Akademii nauk UkrSSR)

TITLE: Monoalkylamides of alkyl methylphosphonates

SOURCE: Zhurnal obshchey khimii, v. 36, no. 9, 1966, 1636-1639

TOPIC TAGS: insecticide, monoalkylamine-alkyl methyl-phosphonates, ORGANIC AMIDES, PHOSPHONATE, PHOSPHONIC ACID

ABSTRACT: In a search for new insecticides, a series of monoalkylamides of alkyl methylphosphonates was obtained by the reaction of methylphosphonic acid chloride with primary amines in the presence of triethylamine in an ether solution at room temperature:



Composition and properties of the amides are given in the table.

Card 1/4

UDC: 547.26'118

ACC NR: AP6031382 Table 1. Monoalkylamides of alkyl methylphosphonates

$\text{CH}_3\text{P}(\text{O})(\text{OR})\text{NH}\text{R}'$						
R	R'	yield, %	bp (p, mm)	$d_4^{20}$	$n_4^{20}$	
CH <sub>3</sub>	CH <sub>3</sub>	a, 37	72-73° (0.02)	1.1283	1.4423	
CH <sub>3</sub>	C <sub>2</sub> H <sub>5</sub>	a, 58	78-79 (0.02)	1.0779	1.4402	
CH <sub>3</sub>	iso-C <sub>3</sub> H <sub>7</sub>	a, 42	81-83 (0.03)	1.0402	1.4373	
CH <sub>3</sub>	u.-C <sub>4</sub> H <sub>9</sub>	a, 36	95-96 (0.1)	1.0492	1.4424	
C <sub>2</sub> H <sub>5</sub>	CH <sub>3</sub>	b, 82 (69)	86-88 (0.5)	1.0833	1.4530	
C <sub>2</sub> H <sub>5</sub>	C <sub>2</sub> H <sub>5</sub>	b, 72	91-93 (0.4)	1.0482	1.4372	
C <sub>2</sub> H <sub>5</sub>	iso-C <sub>3</sub> H <sub>7</sub>	b, 78 (62)	66-67 (0.63)	0.9935	1.4347	
C <sub>2</sub> H <sub>5</sub>	u.-C <sub>4</sub> H <sub>9</sub> **	a, 54 (11)	100-101 (0.1)	0.9971	1.4473	
iso-C <sub>3</sub> H <sub>7</sub>	CH <sub>3</sub>	b, 81 (58)	73-75 (0.06)	1.0372	1.4359	
iso-C <sub>3</sub> H <sub>7</sub>	C <sub>2</sub> H <sub>5</sub>	b, 79	69-71 (0.03)	1.0403	1.4345	
iso-C <sub>3</sub> H <sub>7</sub>	iso-C <sub>3</sub> H <sub>7</sub>	b, 69	85-87 (0.97)	0.9863	1.4318	
Card 2/4	iso-C <sub>3</sub> H <sub>7</sub>	u.-C <sub>4</sub> H <sub>9</sub>	a, 54 (13)	1.08-130 (11)	0.9712	1.4376

ACC NR: APR 1968

IR <sub>2</sub>		Element (%)		formula	calibration
Found	Calcd.	Element	%		
28.89	29.13	N	11.43	C <sub>2</sub> H <sub>10</sub> NO <sub>2</sub> P	N 11.55
33.54	33.65	CH <sub>3</sub> O	22.53	C <sub>4</sub> H <sub>12</sub> NO <sub>2</sub> P	CH <sub>3</sub> O 22.53
38.12	38.36	CH <sub>3</sub> O	20.65	C <sub>5</sub> H <sub>14</sub> NO <sub>2</sub> P	CH <sub>3</sub> O 20.55
42.92	42.93	CH <sub>3</sub> O	18.74	C <sub>6</sub> H <sub>16</sub> NO <sub>2</sub> P	CH <sub>3</sub> O 18.72
33.32	33.65	N	10.21	C <sub>4</sub> H <sub>12</sub> NO <sub>2</sub> P	N 10.22
37.92	38.36	N	9.22;	C <sub>5</sub> H <sub>14</sub> NO <sub>2</sub> P	N 9.27;
		P	20.53		P 20.49
43.08	42.93	P	18.59	C <sub>6</sub> H <sub>16</sub> NO <sub>2</sub> P	P 18.75
47.39	47.60	N	7.58	C <sub>7</sub> H <sub>18</sub> NO <sub>2</sub> P	N 7.61
38.03	38.36	N	9.34	C <sub>5</sub> H <sub>14</sub> NO <sub>2</sub> P	N 9.27
42.53	42.98	N	8.43	C <sub>6</sub> H <sub>16</sub> NO <sub>2</sub> P	N 8.43
47.11	47.60	N	7.99;	C <sub>7</sub> H <sub>18</sub> NO <sub>2</sub> P	N 8.04;
		P	17.34		P 17.28
52.13	52.22	N	7.28;	C <sub>8</sub> H <sub>20</sub> NO <sub>2</sub> P	N 7.25;
		P	16.04		P 16.05

Card 3/4

ACC NR: AP6031382

These amides have strong insecticidal properties but are very toxic to domestic animals. Monoalkylamides of alkyl methyphosphonates react with tert-butyl hypochlorite to form N-chloro-N-alkylamides of alkyl methylphosphonates. The reaction takes place in chloroform at 20-30°C. [WA-50; CBE No. 12]

SUB CODE:06,07/ SUBM DATE: 17Jul65/ ORIG REF: 003/ OTH REF: 014/

Card 4/4

KHODCHENKO, L.P., inzhener; GOLIK, G.I., inzhener.

Standard metallic edge fittings for construction yards.  
Shakht.stroi. no.4:25-27 Ap '57. (MLRA 10:7)  
(Building materials industry--Equipment and supplies)

GOLIK, G.Kh., student IV Kursa; FEDOROV, I.P., student V Kursa

Professor Petr Ivanovich Shatilov, founder of the original  
Russian school of therapeutics. Klin.med. 3. no.3:37-91  
A.3 '56. (MIEA 12:8)

1. Iz kafedry profevtiki vnitrennikh bolezney (zav. -  
zasluzhennyi ieiatel' nauki prof. V.M.Kozan- Yasnyy) lechebnogo  
fakul'teta Khar'kovskogo meditsinskogo instituta i 26-y klini-  
chestoy bol'niitsy (glavnnyi vrach M.M.Gorodnichenko).

(BIOGRAPHIES

Shatilov, Petr I.)

GOLIK, V.I., India (Gorodskiy) 100000, 100, Gorkogo str (Novosibirsk).

Uniform commodity of aviation and space equipment, Mail-order rep.,  
45 rev.9.00-84, S '89.  
(CIA 1446)

1. Radio talk at radio Nov. 11 '89 (for Golik).  
(radio and Freightage)

34

A 53

296. Fractional optical phenomena in the presence of a high-pressure gaseous medium. I. I. Tsvetkov, G. V. Sivash, I. I. Goryainov, V. V. Klyukin, B. V. Klyukin. 1949. *Izv. Akad. Nauk SSSR*.

My basic idea of the plasma was that the electrons were emitted from the cathode and the discharge tube bearing a DC voltage. As the electrons move in the field of the anode, they are deflected and all the electrons pass through the anode potential change. The electrons start with positive directed velocity as it passed the anode and had a short distance beyond it passed into the field of the two anode lenses. The influence of the field of such factors as the current flowing in the anode could suggest the location of the lens, so the effect of extraction was examined. The field strength of optimum focusing decreased as an anode current increased for given current and voltage (impulses). The anode was exchanged with a current condition. In this case two lenses were situated from a distance of about 10 cm and a focus was obtained.

#### ASME-SEA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515720010-0"

**"APPROVED FOR RELEASE: 09/24/2001**

**CIA-RDP86-00513R000515720010-0**

APPROVED FOR RELEASE: 09/24/2001

**CIA-RDP86-00513R000515720010-0"**

VALIK, K.N. [Holyk, K.N.]

Diurnal and seasonal dynamics of the intensity of photosynthesis in  
the sweet cherry, cherry, plum and apricot. Ukr. bot. zhur. 19 no.3:  
20-27 '6. (NIRA 15:7)

1. Institut botaniki AN UkrSSR, otdel fotosintezu  
(Photosynthesis) (Fruit trees)

GOLIK, V. N. [holy], 1915]

Intensity of photosynthesis and transpiration in the leaves  
of different sides of the green in the sweet cherry, sour  
cherry, plum and apricot depending on the light. Ukr. bot.  
zhar. 1959, v. 35, p. 102.

I. Institute of physiology, AN UkrSSR, of the photosyn-  
thesis.

GOLIK, K.N. [Holyk, F.M.]

Effect of shade on the intensity of photosynthesis and  
transpiration in the representatives of Prunaceae. Ukr. bot.  
zhur. 21 no.1:18-24 1964. (CISRA 12:1)

1. Otdel fotosintezu Instituta botaniki AN UkrSSR,

"APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515720010-0

On 2/1  
Date 1/20/1964  
Category A2

(HL, 23-97, 114)

APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515720010-0"

**"APPROVED FOR RELEASE: 09/24/2001**

CIA-RDP86-00513R000515720010-0

APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515720010-0"

GARIBOLDI

三

Dependence of the average values characterizing elastic scattering of electrons on gases on the effective cross section for transmission of momentum. I. G. Gulyaev, V. V. Kostylev, and S. T. Slobod'ko. *Zh. teor. i eksper. fiz.*, 3, 100, 1967.

APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515720010-0"

Jul 49

ESR/Physics  
Electron Microscope

Arce, Mercury

"Electronic Optical Phenomena in the Plasma of a  
Mercury Arc Under Low Pressure," I. I. Golik, S. V.  
Spirak, Phys Rev, Moscow State University M. V.  
Lomonosov, 9 pp

"Zhur Tekh Fiz" Vol XIX, No 7

Shows that in the field of a magnetic lens acting  
on a stationary plasma, contractions of two types  
develop: (1) diffusive-plasmatic, and (2)  
electronic optic. Second case develops for a  
rapid change in potential and an artificial con-  
traction in plasma. Measured distribution of  
charges along radius of ray and clarified in-  
fluence of second magnetic lens capturing focusing,  
magnitude of discharge current influences focusing,  
as it does all effects of the magnetic field in  
the plasma. Decrease in contraction with increase  
in current is due to increase in proportion of  
speed of chaotic motion of the electrons in com-  
parison with direction. Submitted 29 Jun 49.

51/49T59

GOLIK, L. I.

USSR/Physics - Plasma Oct 53

"Electron Optical Phenomena in Focussing and  
Stationary Plasma in Mercury Vapors," L.I. Golik  
(deceased) and G.V. Spivak, Chair of Electron Optics  
Vest Mch Univ, Ser Fizkomat i Yest Mchuk, No 7,  
pp 117-123

In their previous works (see their Eksa Meteor Fiz,  
Vol 23, 1953) at their lab the authors established  
the presence of the phenomena of plasma focussing,  
which occurs under the action of external and in-  
ternal electric and magnetic fields. Their pur-  
pose here is to study the phenomena of convection

27397

(necking) of stationary plasma toward the axis of  
symmetry in a strong and concentrated external  
magnetic field.

GOLIK, L. I., MEGACHEVSKY, I. I., and CHIKYAVEL'BEVY, N. I.

"Application of a Differential Thermo-Couple for the  
Investigation of Mass Transfer at Drying Silicate  
Materials."

Report submitted for the Conference on Heat and Mass Transfer,  
Minsk, USSR, June 1961.

231(2)

S/100, 417/156, 224, 227, 228  
3104, 3105

26.2421

AUTHORS: J. C. H. K. R., IRVING, J. S., AND T. H. M.

PERIODICAL: *Journal of Health Politics, Policy and Law*, v. 10(1), pp. 1-14, 1985, 28-32

X

APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515720010-0"

102

6. The laboratory will be available...

ASSOCIATION: *International Association of the Deaf, Inc. (IAD), a non-profit organization*

MCILK, N., writer of 'Sakharov', KAZAKHSSR, 1960, 1961,

estimate more precisely the mechanical damage of space craft.  
Makuleev, prov. 1960 no.12;15-16 4 '60. (MFA 1960)

i. Vsesoyuznyy zhurnal pishchevoy promstvosti.

GOLIK, M. G.

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